**Figure 1**

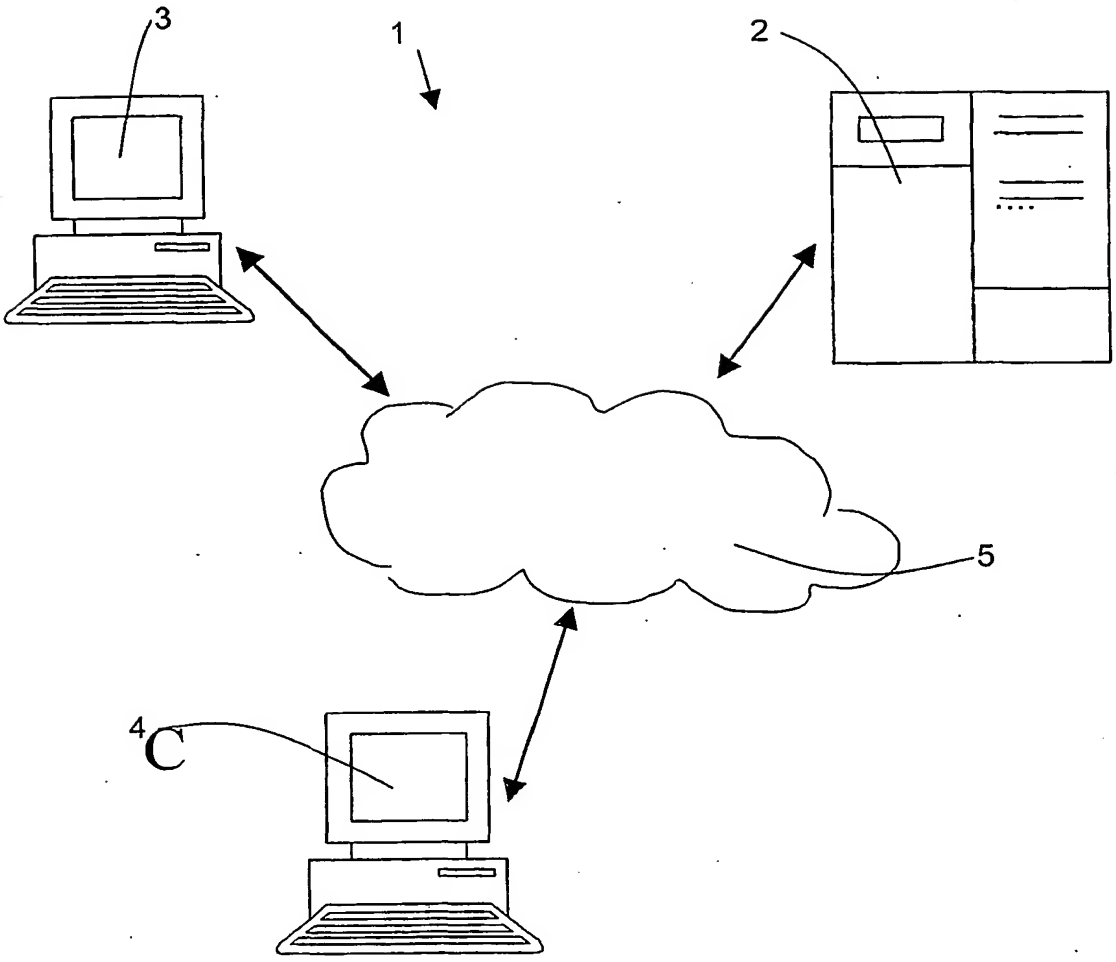

**Figure 2**

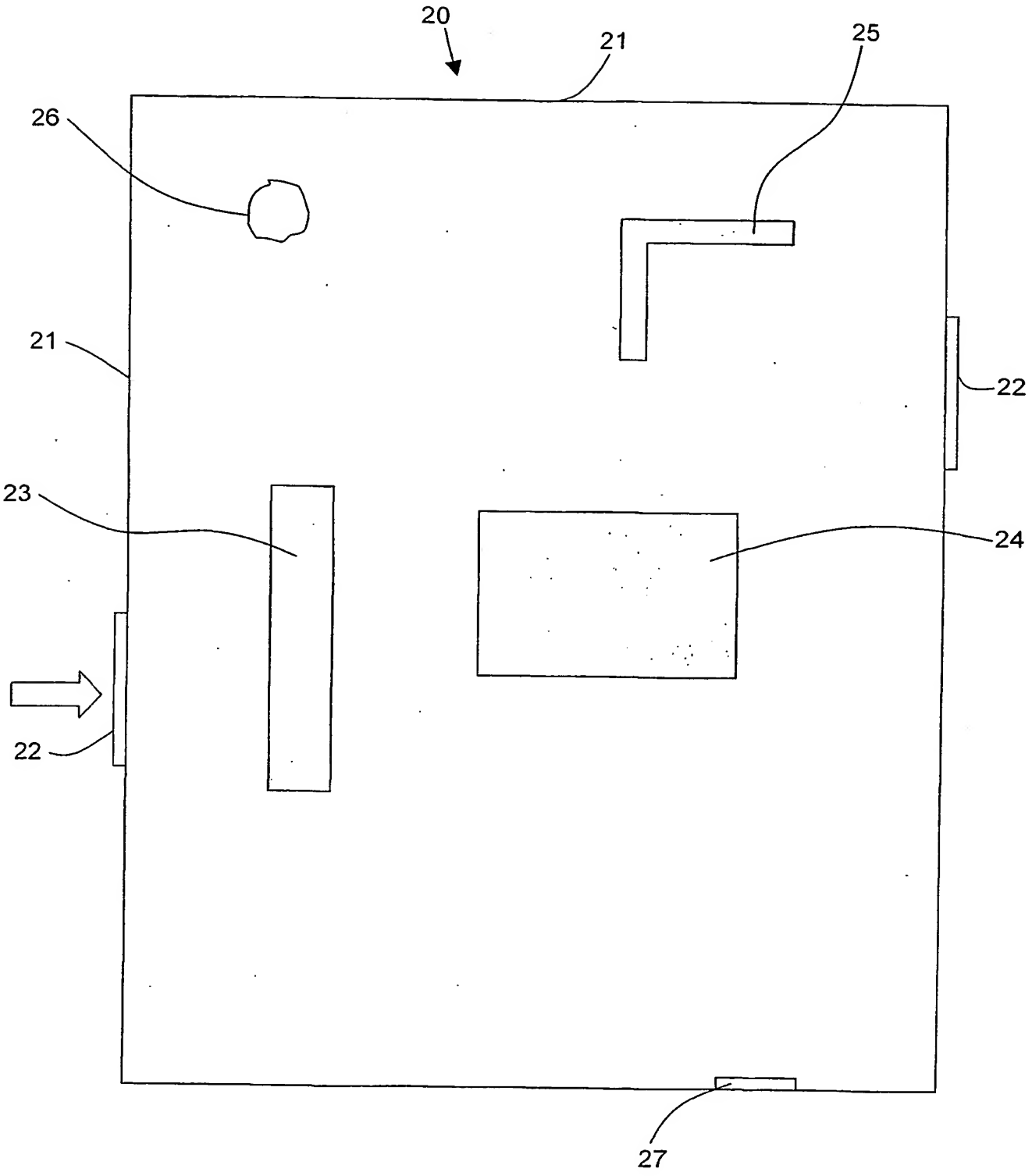

**Figure 3**

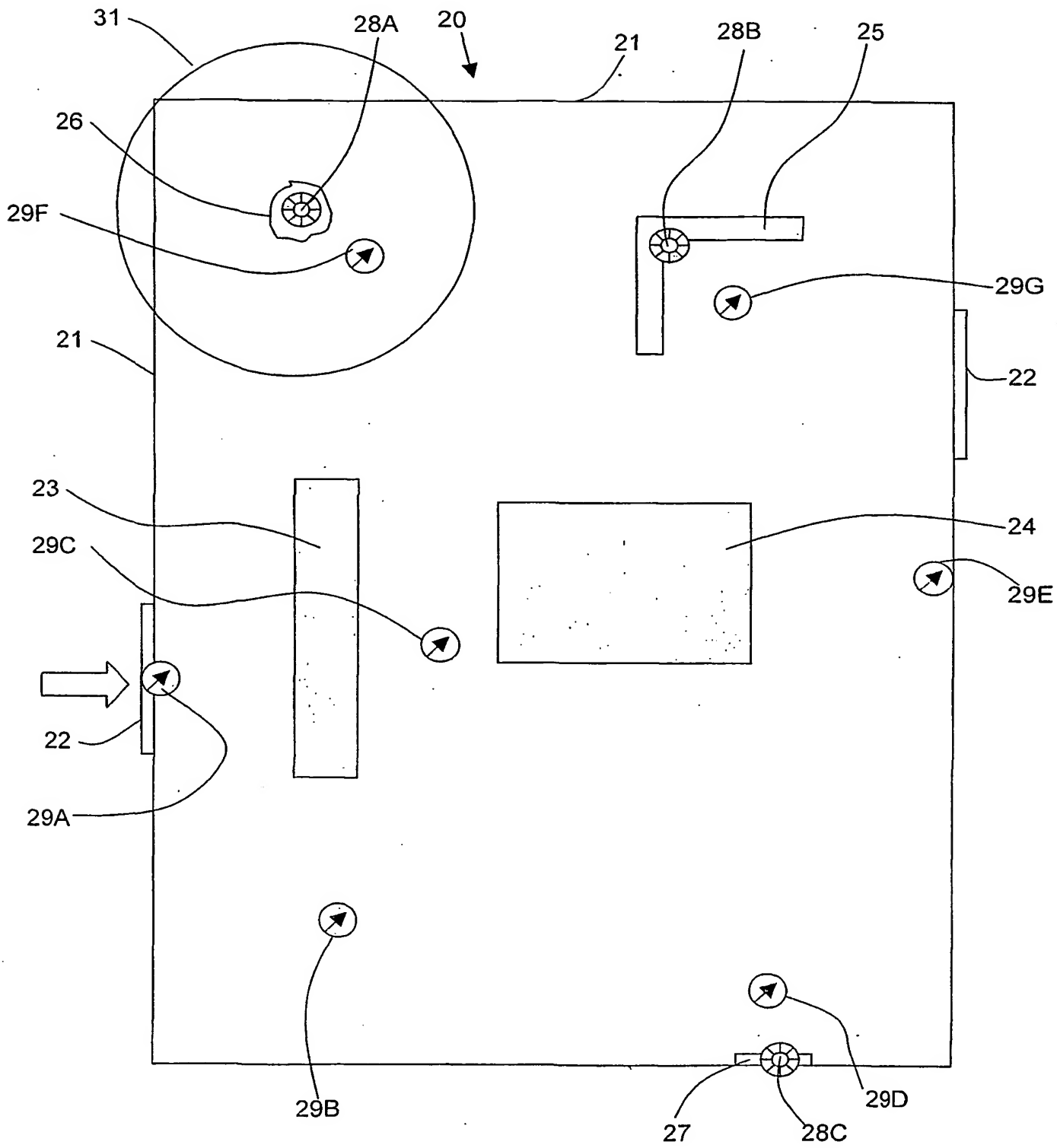
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Figure 4

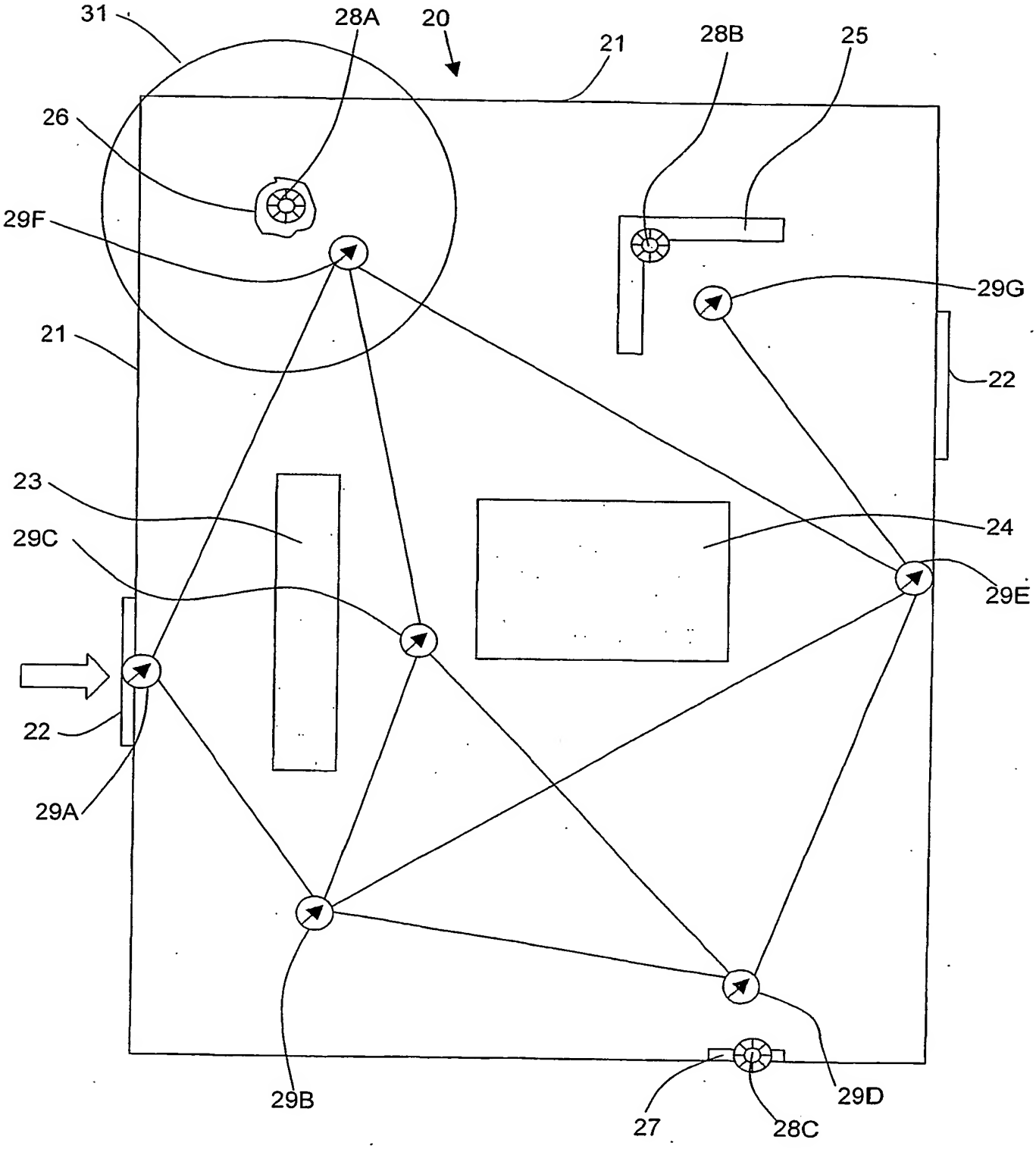
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**Figure 5**

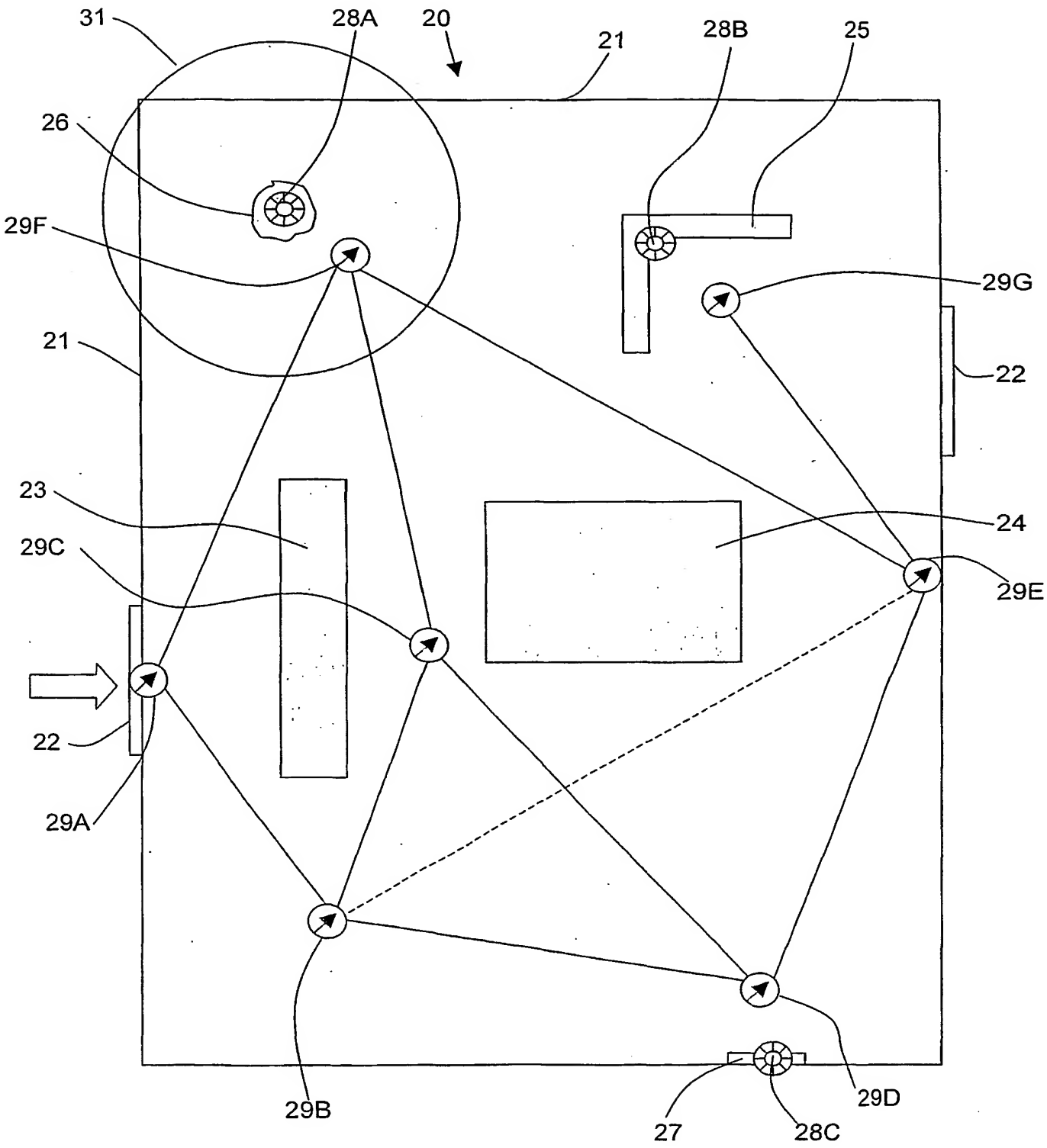
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**Figure 6**

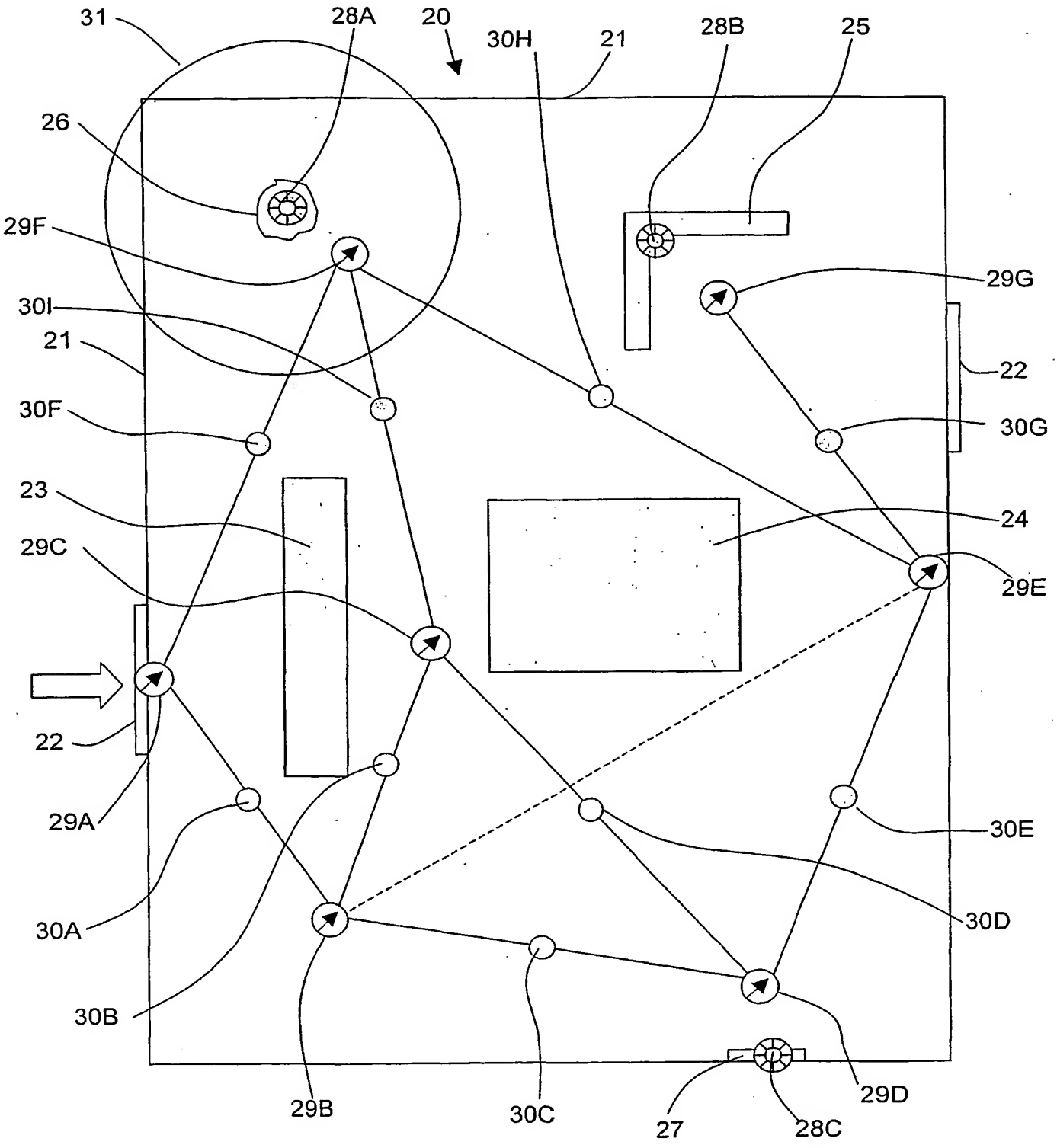
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**Figure 7**

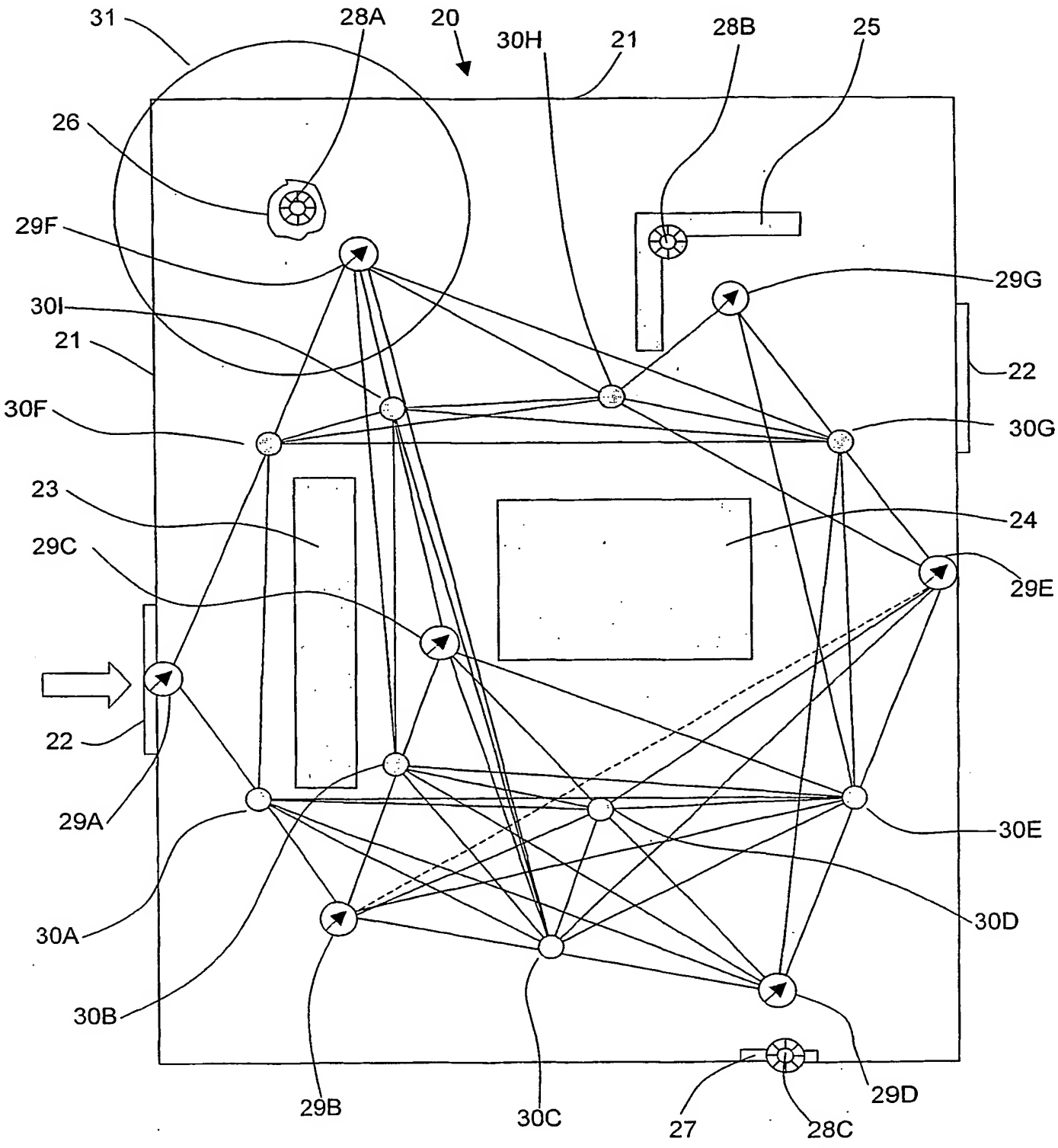
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**Figure 8**

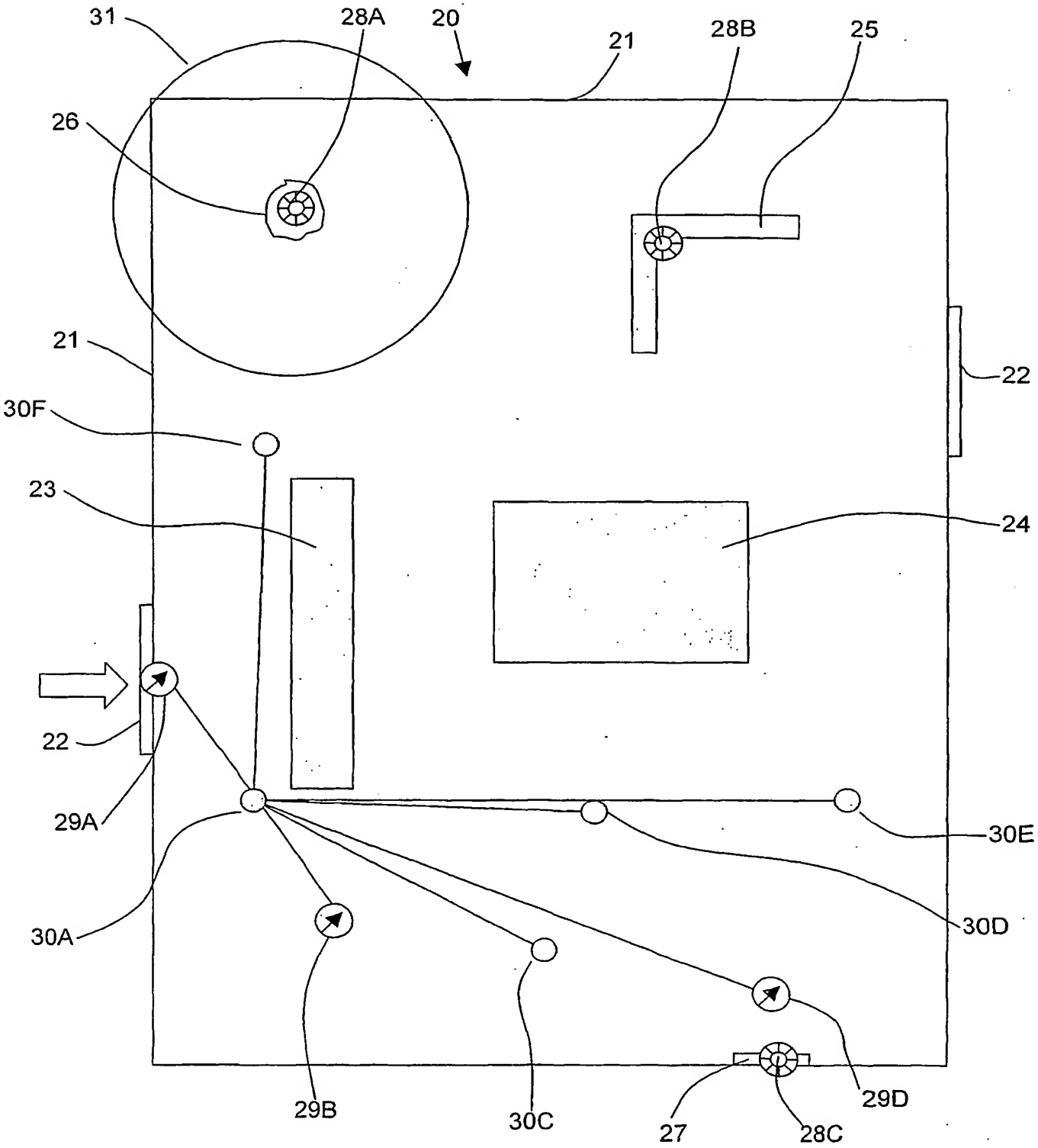
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**Figure 9**

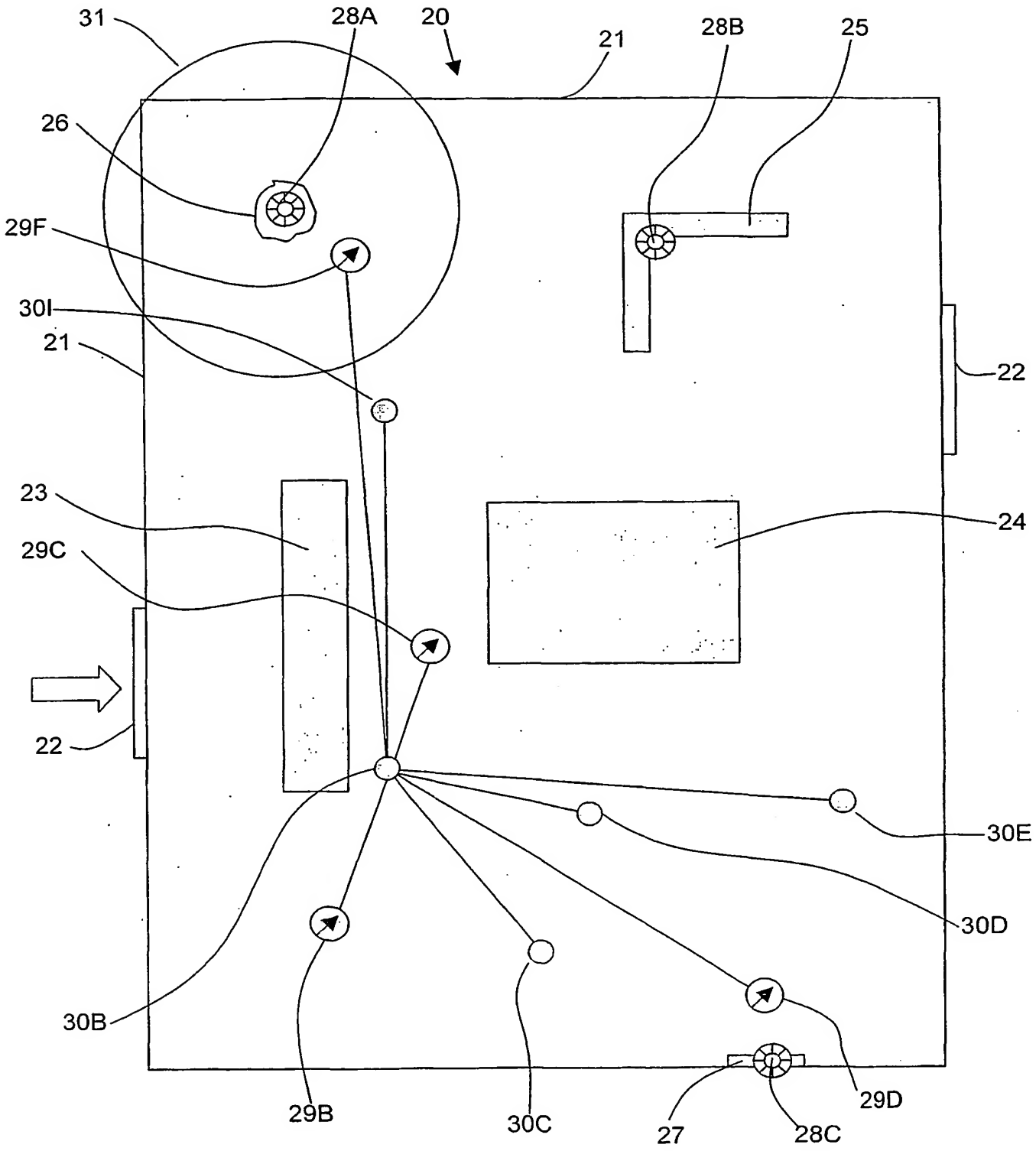
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Figure 10

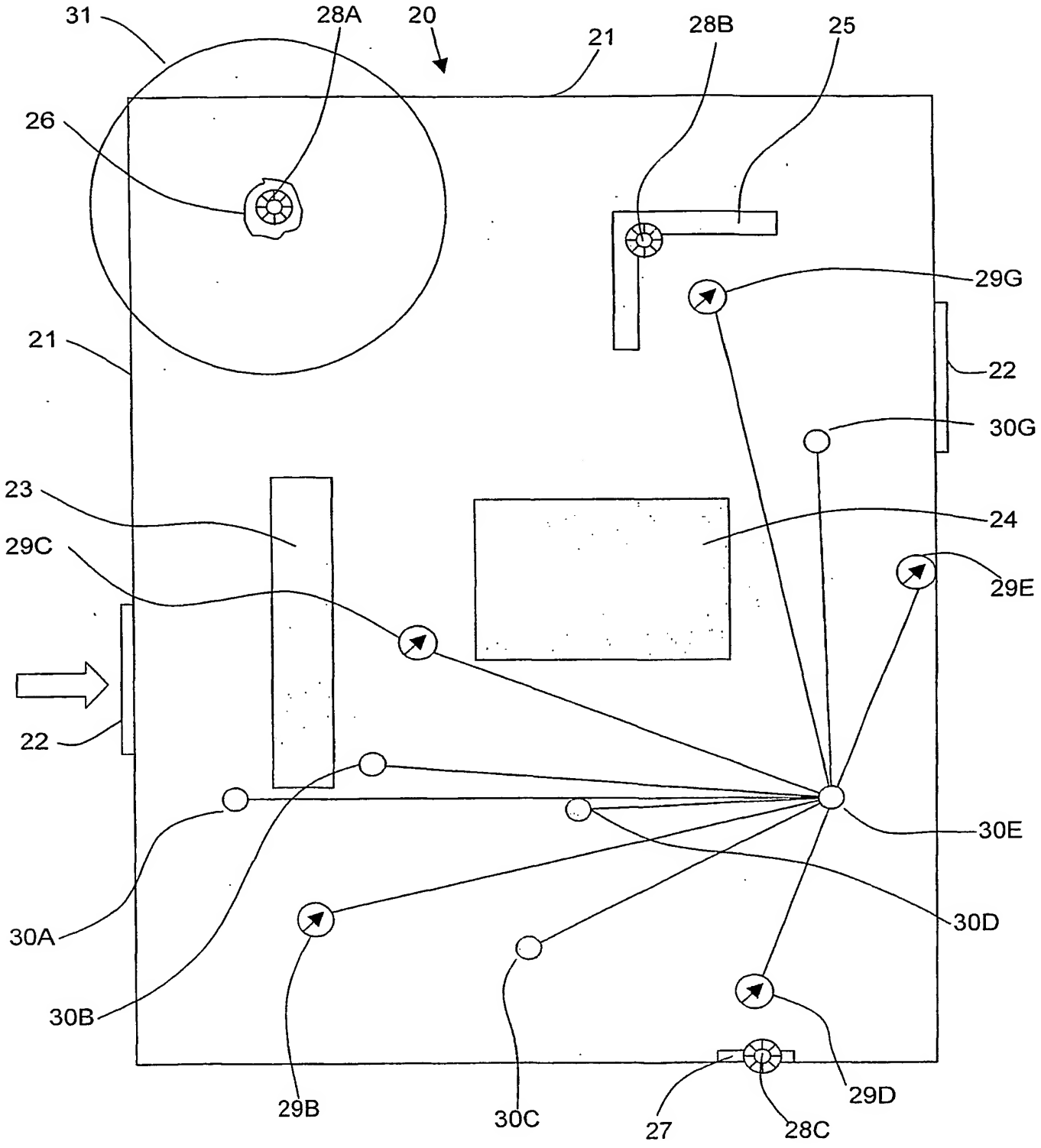
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Figure 11

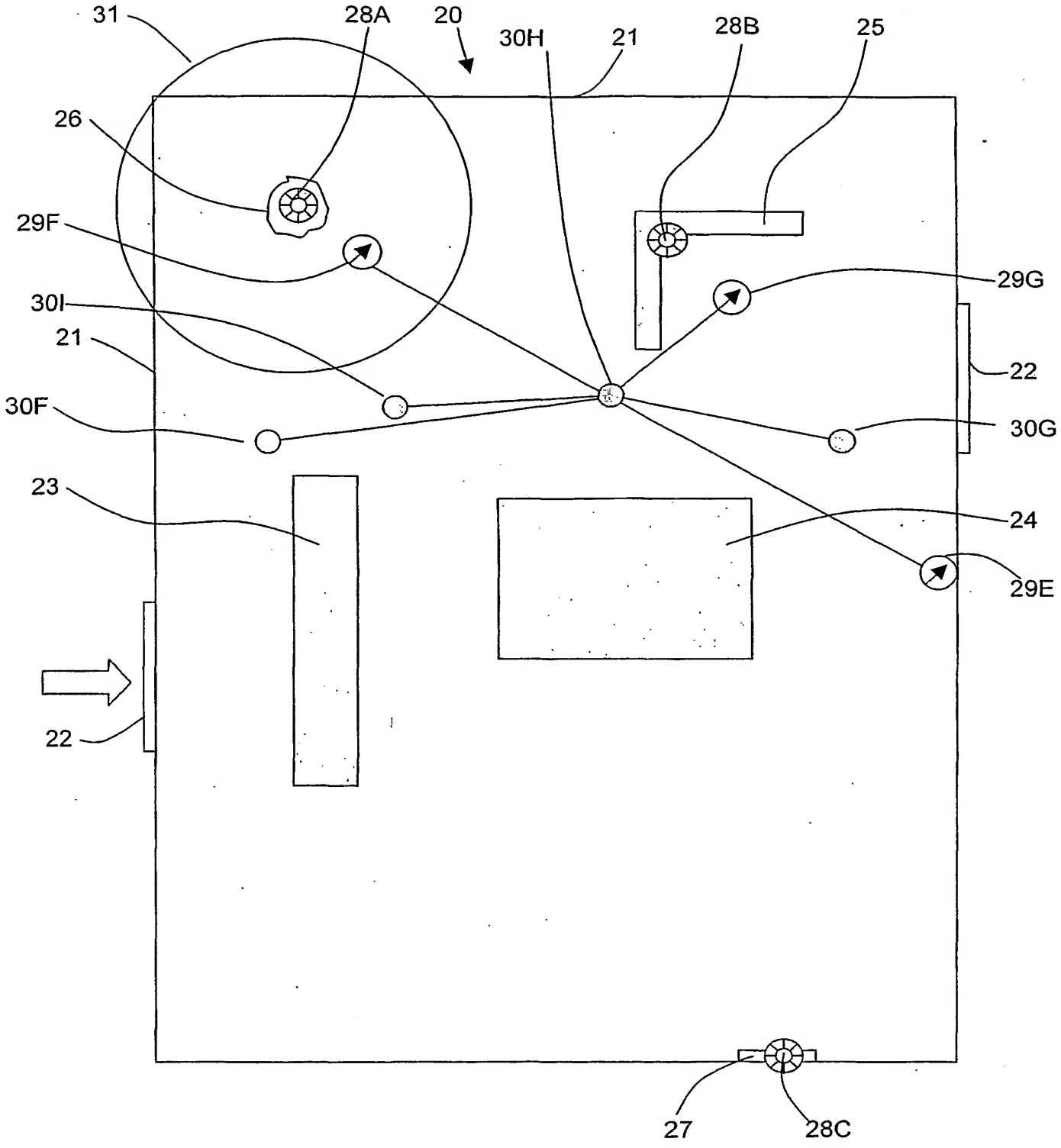
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**Figure 12**

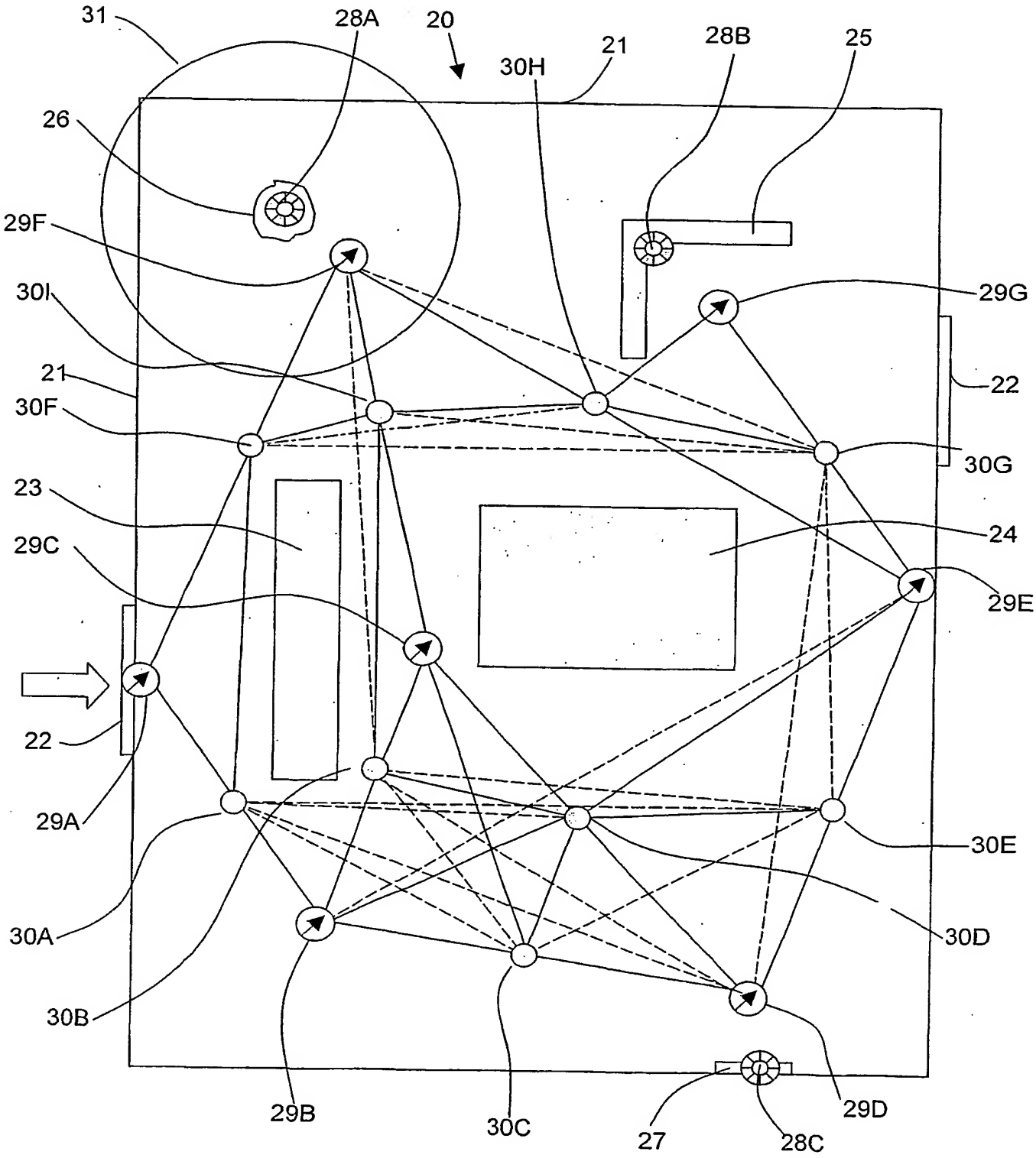
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Figure 13

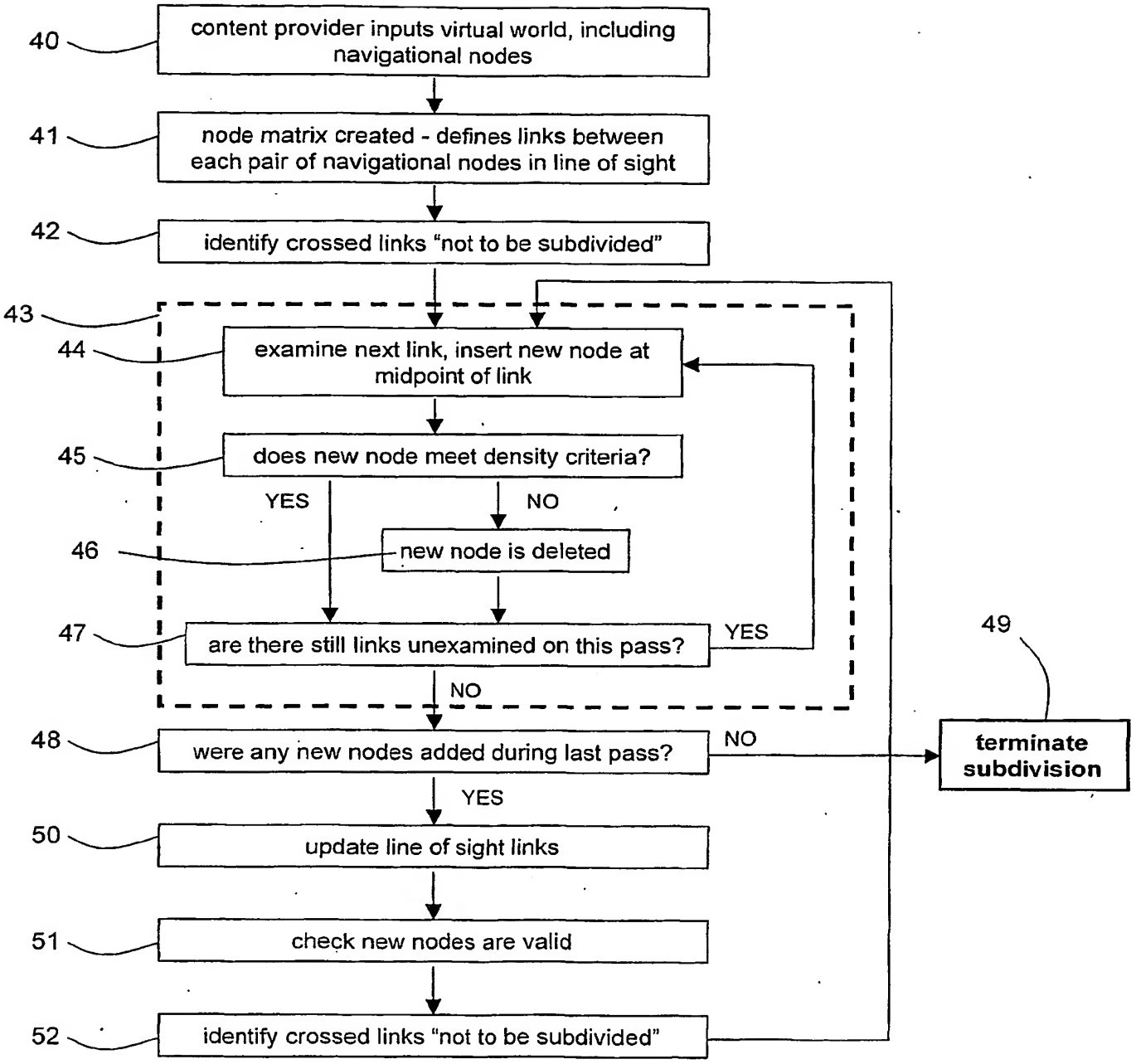
40
content provider inputs virtual world, including navigational nodes
41
node matrix created - defines links between each pair of navigational nodes in line of sight
42
identify crossed links "not to be subdivided"
43
44
examine next link, insert new node at midpoint of link
45
does new node meet density criteria?
YES
NO
46
new node is deleted
47
are there still links unexamined on this pass?
YES
NO
48
were any new nodes added during last pass?
NO
49
terminate subdivision
YES
50
update line of sight links
51
check new nodes are valid
52
identify crossed links "not to be subdivided"

FIGURE 14A

OPTIMUM NODE CONNECTION

FIGURE 14B

AVAILABLE NODE CONNECTION

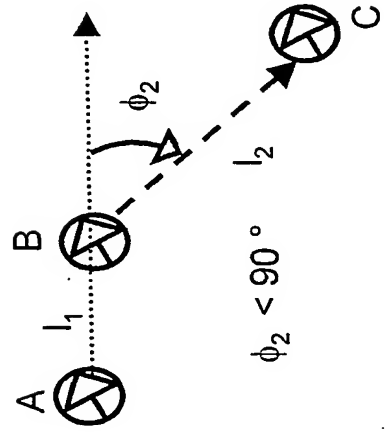


FIGURE 14C

INEFFICIENT NODE CONNECTION

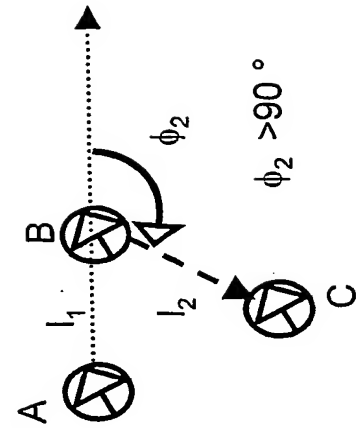

FIGURE 15A

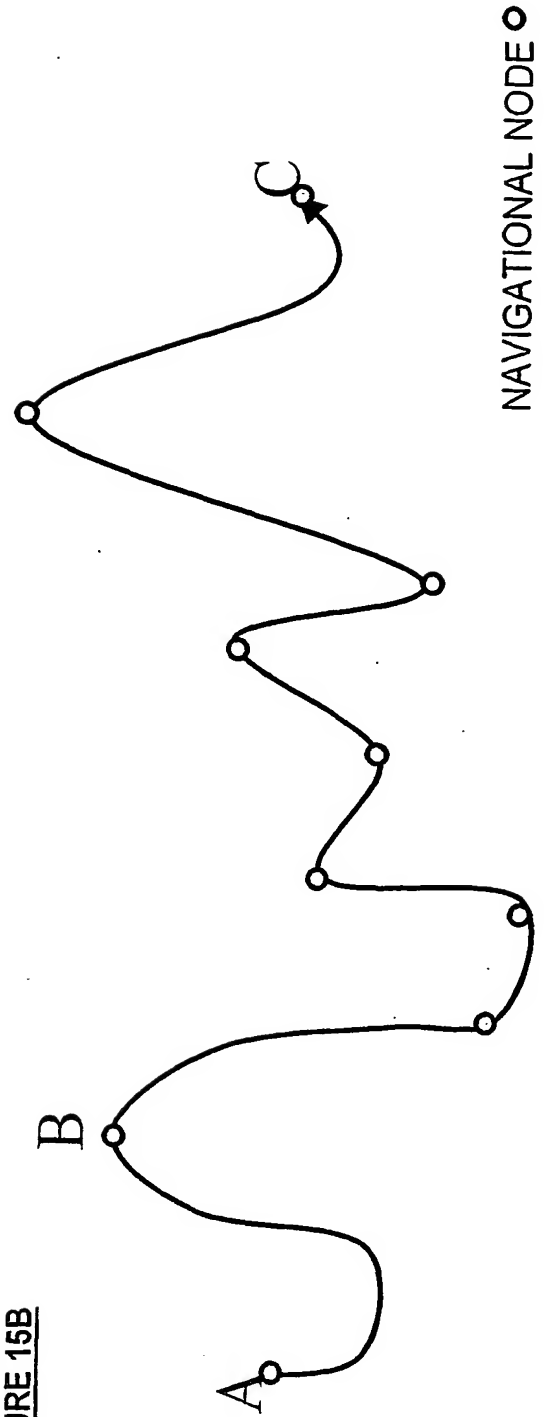


FIGURE 15B

NAVIGATIONAL NODE WITH VALID LOS CONSTRAINED TO A RANGE 0 ° TO θ°

FIGURE 16A

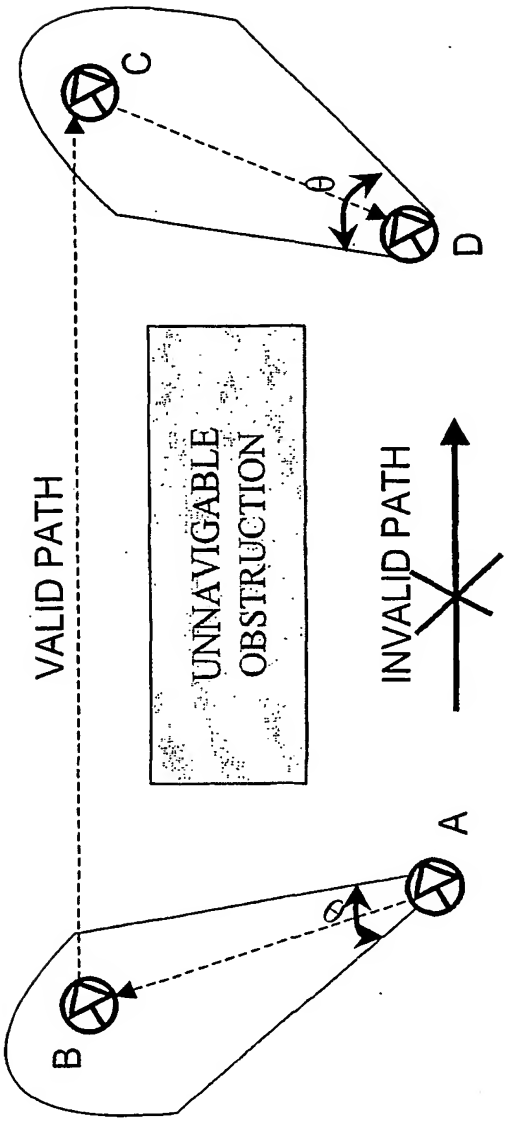


FIGURE 16B

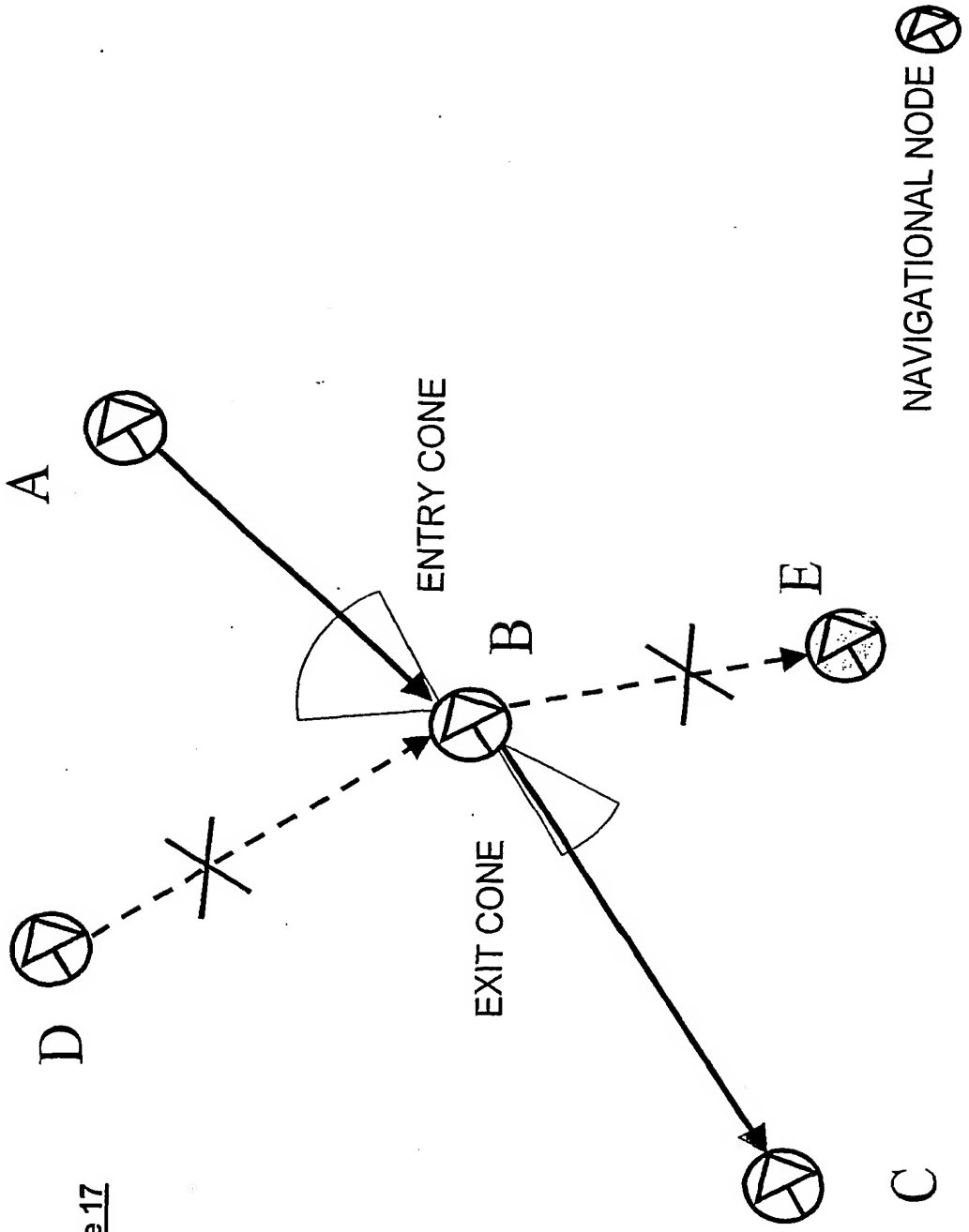


Figure 17